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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,059	04/13/2001	Mark Gray	55218-0507	5951

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EXAMINER

REFAI, RAMSEY

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,059

Applicant(s)

GRAY, MARK

Examiner

Ramsey Refai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16,20-29,31-40 and 42-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,20-29,31-40 and 42-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Responsive to Request for Continued Examination (RCE) filed on July 25, 2005. Claims 1, 6, 11-16, 20, 27-29, 31, 38-40, 46-49, and 54-57 have been amended. Claims 58-59 have been newly added. Claims 1-16, 20-29, 31-40, and 42-59 are currently pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-10, 12, 14, 20-24, 27, 31-35, 38, 42-45, 48, 50-53, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345).

3. As per claim 1, Schenkel et al teach a method for determining one or more logical interconnections among a plurality of network devices that are interconnected in a network in an indefinite relationship, wherein a power state is associated with a first network device, the method comprising the computer-implemented steps of:

changing the power state of the first network device from either (a) an unpowered state to a powered state or (b) from the powered state to the unpowered state; identifying whether an alteration occurs at a second network device in response to changing the power state of the first

network device (**column 2, lines 20-40; shows a signal sent from a source device to a destination device, Figure2, and column 3, lines 18-32**).

4. Schenkel et al fail to teach creating and storing first information representing a logical connection of the first network device to the second network device.

5. However, Kracht teaches creating and storing information representing a logical connection of the first network device to the second network device (**column 3, line 59 –column 4, line 10**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al and Kracht because Kracht's use of creating and storing information representing a logical connection of devices in Schenkel et al's system would have created a way to maintain information regarding neighboring devices on a database.

6. As per claim 2, Schenkel et al fail to teach retrieving second information from a database, wherein the second information represents one or more logical connections of the first network device to the second network device; comparing the second information from the database with the first information; and generating an error if the second information indicates that a logical connection exists between the first and second network devices but the first information does not indicate that the logical connection exists between the first and second network devices.

7. However, Kracht teaches a discovery mechanism that has a data file, comparing the returned sysObjectID variable to the entries within the data file, and eliminating information representing a plurality of devices that is incorrectly identified as a known device (**column 4, lines 10-21 and column 7, line 61 – column 8, line 15**). It would have been obvious to one of

the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al and Kracht because Kracht's use of comparing device information in Schenkel et al's system would enhance updating device information stored in a database or data file.

8. As per claim 3, Schenkel et al teach the second network device is a terminal server **(column 2, line 65 – column 3, line 7)** and wherein the step of identifying whether the alteration occurs at the terminal server further comprises: determining whether a state of a port of the terminal server is dead to active in response to changing the power state of the first network device **(column 30 –37, column 6, lines 30-35, column 6, lines 55-56 and column 27, lines 55-62,).**

9. As per claim 5, Schenkel et al teach receiving, in response to changing the power state of the first network device, additional information from the first network device; and recording the additional information **(Figure 2, column 3, lines 19-32, and column 4, line 1-12).**

10. As per claim 6, the claim contains similar limitations as claim 1; therefore it is rejected under the same rationale.

11. As per claim 7, Schenkel et al teach a set of rules are applied based upon one or more attributes of each connection **(column 1, lines 27-59).**

12. As per claim 8, Schenkel et al teach one or more attributes of each connection include a type of connection between two or more network devices (**column 1, lines 41-59**).
13. As per claim 9, Schenkel et al teach one or more attributes of each connection include the number of connections between a specific network device and one or more other network devices (**column 1, lines 35-41**).
14. As per claim 10, Schenkel et al teach one or more attributes of each connection include that a particular connection is between a first type of network device and a second type of network device (**column 1, lines 42 –45 and column 2, line 65- column 3, line 5**).
15. As per claim 12, these claims contain similar limitations as claim 1 above, therefore are rejected under the same rationale.
16. As per claims 14, 48, and 56, these claims contain similar limitations as claim 3 above; therefore it is rejected under the same rationale.
17. As per claims 42 and 50, Schenkel et al teach a set of rules are applied based upon one or more attributes of each connection (**column 1, lines 27-59**).
18. As per claims 43 and 51, Schenkel et al teach one or more attributes of each connection include a type of connection between two or more network devices (**column 1, lines 41-59**).

19. As per claims 44 and 52, Schenkel et al teach one or more attributes of each connection include the number of connections between a specific network device and one or more other network devices (**column 1, lines 35-41**).

20. As per claims 45 and 53, Schenkel et al teach one or more attributes of each connection include that a particular connection is between a first type of network device and a second type of network device (**column 1, lines 42 –45 and column 2, line 65- column 3, line 5**).

21. As per claims 20-24, 27, 31-35, and 38, these claims contain similar limitations as claims 1-3, 5-10, 12, 14, and 16 above, therefore are rejected under the same rationale.

22. Claims 4, 11, 15, 46, 49, 54, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345) and in further view of Noy (U.S. Patent No. 6,628,623).

23. As per claim 4, Schenkel et al teach the second network device and identifying whether the alteration occurs at the second network device in response to changing the power state of the first network device (**column 2, lines 20-40, Figure 2, and column 3, lines 18-32**).

24. Schenkel et al and Kracht fail to teach the use of a switch and determining whether a trap on a port of the switch is raised.

25. However, Noy teaches the switch connectivity information may be acquired by setting a simple network management protocol (SNMP) trap at each switch where each switch provides information when a new MAC address becomes known to it. It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Noy because Noy's use of determining port activity on a switch in Schenkel et al-Kracht's system would enhance discovery of neighboring devices by determining if a port on a switch is raised when a signal is sent from the first device to a switch and creating and storing information regarding the devices attached to switch.

26. As per claims 11, 15, 46, 49, 54, and 57, these claims contain similar limitations as claim 4 above; therefore they are rejected under the same rationale.

27. Claims 13, 25, 26, 28, 36-37, 39, 47, 55, 58, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345) and in further view of Singh (U.S. Patent No. 5,347,167).

28. As per claim 13, Schenkel et al and Kracht fail to teach a first network device is connected to a power controller and wherein the signal from the control device is sent to the power controller that changes the power state of the first network device from unpowered to powered.

29. However, Singh teaches the use of a power controller device that power up connected computers and other peripheral devices (**Figures 1,3 and column 3, lines 20-50**).). It would

have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Singh because Singh's use of a power controller in Schenkel et al-Kracht's system would allow for discovery of devices by using a power controller to power up the first device and all other devices attached to the first device and then creating and storing information regarding the devices that are powered up due to the power controller.

30. As per claims 25 and 58, Schenkel et al and Kracht fail to teach changing the power state of the first network device is in response to a signal from a third network device.

31. However, Singh teaches a special key that sends a signal to change the power of a device (**column 4, lines 19-35**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Singh because Singh's use of a special key in Schenkel et al-Kracht's system would allow a user to power up a computer and other devices attached to it using a special key where information regarding these devices is then created and stored in a database.

32. As per claims 26 and 59, Schenkel et al and Kracht fail to teach the first network device is connected to a power controller and wherein the signal from the third network device is sent to the power controller that changes the power state of the first network device.

33. However, Singh teaches a power controller that sends a signal to change to the power controller device that powers a computer and all peripheral devices (**column 4, lines 19-35**). It would have been obvious to one of the ordinary skill in the art at the time of the applicant's

invention to combine the teachings of Schenkel et al, Kracht, and Singh because Kracht's use of creating and storing information and Singh's use of a special key in Schenkel et al's system would allow a user to power up a computer and other devices attached to it using a special key where information regarding these devices is then created and stored in a database.

34. As per claim 28, 36 –37, 39, 47, and 55, these claims contain similar limitations as claims 13, 25-26 above, therefore rejected under the same rationale.

35. Claims 16, 29, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenkel et al (U.S. Patent No. 6,728,670) in view of Kracht (U.S. Patent No. 6,516,345) and in further view of Chang et al (U.S. Patent No. 6,507,273).

36. As per claims 16, 29, and 40, Schenkel et al teach the steps of:

power cycling a first network device; and identifying whether a suspected link of the first network device and a second network device becomes active as a result of power cycling of the first network device (column 19, lines 24-45, column 2, lines 20-40; shows a signal sent from a source device to a destination device, Figure2, column 3, lines 18-32).

37. Schenkel et al fail to teach creating and storing first information representing a logical connection of the first network device to the second network device and also fails to explicitly teach that power cycling a first device is from either "off" to "on" or from "on" to "off".

38. However, Kracht teaches creating and storing information representing a logical connection of the first network device to the second network device (**column 3, line 59 –column 4, line 10**) but fails to teach power cycling from either “off” to “on” or from “on” to “off”.

39. Chang et al teach a method for powering ON or OFF a remote device through remote control by a remote computer via a network system (**abstract**).

40. It would have been obvious to one of the ordinary skill in the art at the time of the applicant's invention to combine the teachings of Schenkel et al, Kracht, and Chang et al because Kracht's use of creating and storing information representing a logical connection of devices and Chang et al's use of powering a device ON or OFF in Schenkel et al's system would have created a way to maintain information regarding devices connected to a first device by powering ON or OFF the first device and monitoring responses/alterations in other devices.

Response to Arguments

41. Applicant's arguments with respect to claims 16, 29, and 40 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments have been fully considered but they are not persuasive.

- In the remarks, the applicant argues that Schenkel et al fail to teach power cycling from either an unpowered state to a powered state and by supplying power to the particular network that previously was not supplied with power.
- In response, the Examiner respectfully disagrees. Schenkel teaches the stimulation of idle devices by using signal bursts in a network to allow discovery of network topology. Signal bursts are sent to a device until no longer idle, which is a change of the power

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state. These signal bursts are used to supply power to the unpowered or idled device.

Signal bursts can then be sent across this device to other devices. (see column 19, lines 32-62, column 22, line 49-column 23, line 28, and column 25, line 60-column 6, line 19). It is the Examiner's position that Schenkel teaching of signal bursts does change the power state of an unpowered or idled device. Claim language has failed to overcome the Schenkel reference therefore rejection is maintained.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Nouri et al (U.S. Patent No. 6,163,849);
- b. Cromer et al (U.S. Patent No. 6,687,348)
- c. Weigold et al (U.S. Patent No. 6,553,499)
- d. Novoa et al (U.S. Patent No. 6,493,824)
- e. Yoshida (U.S. Patent No. 6,381,700)
- f. Sheikh et al (U.S. Patent No. 6,202,160)
- g. Loison (U.S. Patent No. 6,453,423)
- h. Taylor et al (U.S. Patent No. 6,125,449)
- i. Novoa et al (U.S. Patent No. 5,925,131).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Refai whose telephone number is (571) 272-3975. The examiner can normally be reached on M-F 8:30 - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramsey Refai
Examiner
Art Unit 2152

RR
August 15, 2005

LARRY D. DOMAGHUE
PRIMARY EXAMINER

